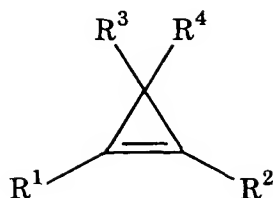


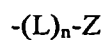
We claim:

1. A compound of the formula:



wherein:

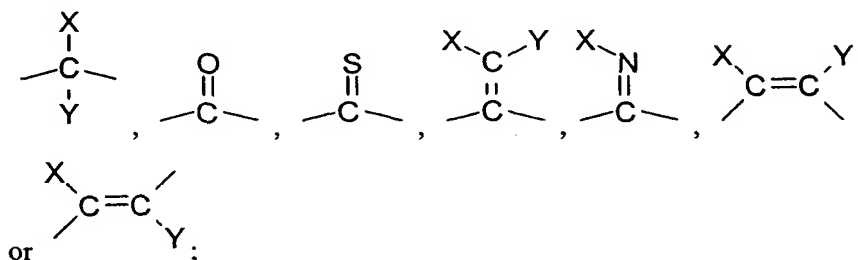
- 5 a) one of R^1 and R^3 is H and R^2 , R^4 , and the other of R^1 and R^3 are independently selected from H and a group of the formula:



wherein:

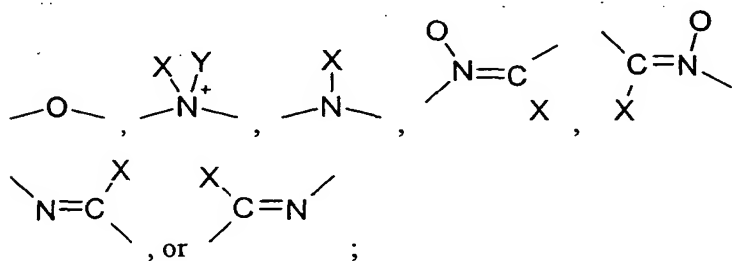
- i) n is an integer from 1 to 12;
 10 ii) each L is independently selected from a member of the group D1, D2, E, or J wherein:

D1 is of the formula:

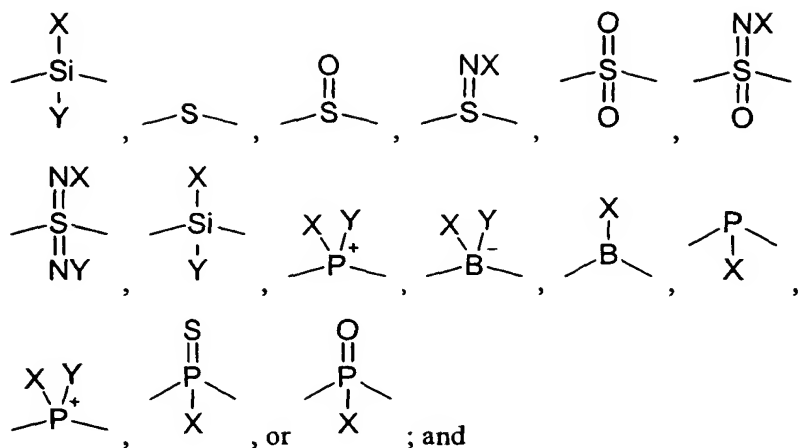


15

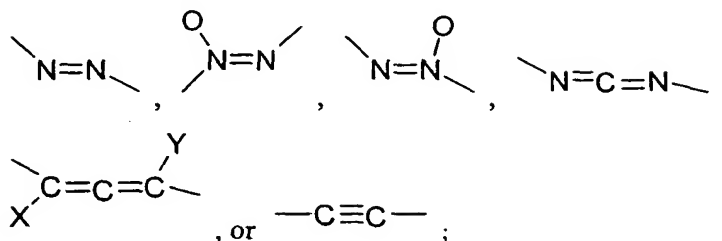
D2 is of the formula:



E is of the formula:

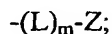


J is of the formula:



wherein:

A) each X and Y is independently a group of the formula:



and

B) m is an integer from 0 to 8; and

C) no more than two D2 or E groups are adjacent to each other and no J groups are adjacent to each other;

iii) each Z is independently selected from:

A) hydrogen, halo, cyano, nitro, nitroso, azido, chlorate, bromate, iodate, isocyanato, isocyanido, isothiocyanato, pentafluorothio, or

B) a group G, wherein G is an unsubstituted or substituted; unsaturated, partially saturated, or saturated; monocyclic, bicyclic, tricyclic, or fused; 4 to 14 membered carbocyclic or heterocyclic ring system wherein;

1) when the ring system contains a 4 membered heterocyclic ring, the heterocyclic ring contains 1 heteroatom;

- 2) when the ring system contains a 5, or more, membered heterocyclic ring or a polycyclic heterocyclic ring, the heterocyclic or polycyclic heterocyclic ring contains from 1 to 4 heteroatoms;
 - 3) each heteroatom is independently selected from N, O, and S;
 - 5 4) the number of substituents is from 0 to 5 and each substituent is independently selected from X;
 - b) the total number of non-hydrogen atoms in each compound is 50 or less; and
 - c) the total number of heteroatoms in $-(L)_n-Z$ is from 0 to 4; and
 - d) either;
 - 10 i) R^1 or R^3 contains at least one group G; or
 - ii) at least one L group is an E group; or
 - iii) at least one of R^1 , R^2 , R^3 , and R^4 contains one to four non-hydrogen atoms and at least one of R^1 , R^2 , R^3 , and R^4 contains more than four non-hydrogen atoms; and its enantiomers, stereoisomers, salts, and
 - 15 mixtures thereof;
 - or a composition thereof;
 - provided that:
 - a) $-(L)_n-Z$ is other than trimethylsilyl, trimethylsilylsulfonyl or thiol; and
 - b) R^1 is other than phenylsulfonyl, phenylthioethyl, diphenylhydroxymethyl,
 - 20 benzo[g]quinolin-7-ol-1-methyl, a malonate derivative, a substituted 3-aminocyclohexenone, a dialkoxybenzylaminocarbonyl; and
 - c) R^3 is other than 2-phenyl-ethenyl, phenylthio, (4-bromo-2-methylphenyl)carbamic acid N-carbonyl, (4-bromo-2-methylphenyl)carbamic acid ethyl ester N-carbonyl, a malonate derivative, aryloxy, or a
 - 25 dialkoxybenzylaminecarbonyl.
2. A method of inhibiting an ethylene response in a plant comprising the step of contacting the plant with an effective ethylene response-inhibiting amount of a cyclopropene derivative of the formula:

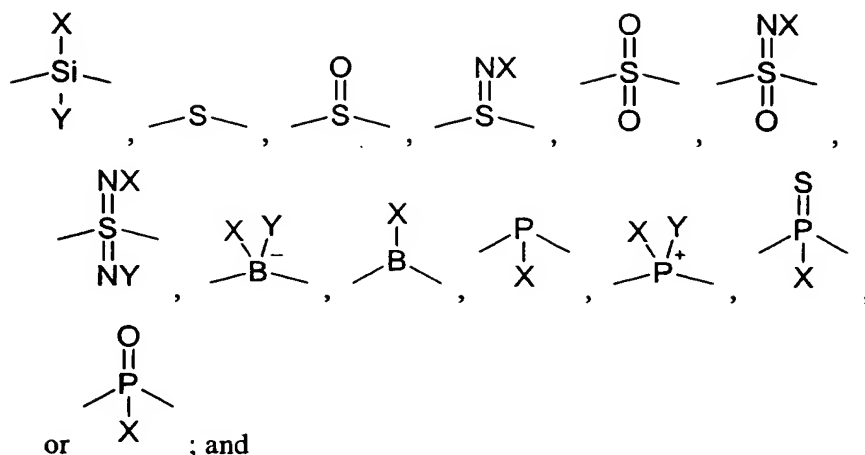
a) one of R^1 and R^3 is H and R^2, R^4 , and the other of R^1 and R^3 are independently selected from H and a group of the formula:

wherein:

ii) each L is independently selected from a member of the group D1, D2, E, or J wherein:

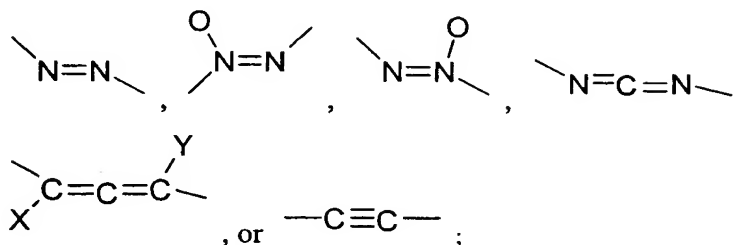
$$\begin{array}{c} \text{X} \\ | \\ \text{---C---} \\ | \\ \text{Y} \end{array}, \quad \begin{array}{c} \text{O} \\ || \\ \text{---C---} \end{array}, \quad \begin{array}{c} \text{S} \\ || \\ \text{---C---} \end{array}, \quad \begin{array}{c} \text{X} \quad \text{Y} \\ \diagdown \quad \diagup \\ \text{C} \\ || \\ \text{---C---} \end{array}, \quad \begin{array}{c} \text{X} \quad \text{N} \\ \diagdown \quad \diagup \\ \text{C} \\ || \\ \text{---C---} \end{array}, \quad \begin{array}{c} \text{X} \quad \text{Y} \\ \diagdown \quad \diagup \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \end{array}, \text{ or } \begin{array}{c} \text{X} \\ \diagdown \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \\ \text{Y} \end{array}.$$
$$\begin{array}{ccccccc} \text{---O---} & , & \begin{array}{c} \text{X} \quad \text{Y} \\ \diagup \quad \diagdown \\ \text{N}^+ \\ \diagdown \quad \diagup \\ \text{---} \end{array} & , & \begin{array}{c} \text{X} \\ | \\ \text{N} \\ \diagdown \quad \diagup \\ \text{---} \end{array} & , & \begin{array}{c} \text{O} \\ | \\ \text{N}=\text{C} \\ | \\ \text{X} \end{array} , & \begin{array}{c} \text{---} \\ \diagdown \quad \diagup \\ \text{C}=\text{N} \\ | \quad \diagdown \\ \text{X} \quad \text{O} \end{array} \\ \\ \begin{array}{c} \text{---} \\ \diagdown \quad \diagup \\ \text{N}=\text{C} \\ | \quad \diagdown \\ \text{X} \end{array} & , & \text{or} & , & \begin{array}{c} \text{X} \\ | \\ \text{C}=\text{N} \\ \diagdown \quad \diagup \\ \text{---} \end{array} & ; \end{array}$$

E is of the formula:



5

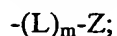
J is of the formula:



wherein:

A) each X and Y is independently a group of the formula:

10



and

B) m is an integer from 0 to 8; and

C) no more than two D2 or E groups are adjacent to each other and no J groups are adjacent to each other;

15

iii) each Z is independently selected from:

A) hydrogen, halo, cyano, nitro, nitroso, azido, chlorate, bromate, iodate, isocyanato, isocyanido, isothiocyanato, pentafluorothio, or

B) a group G, wherein G is an unsubstituted or substituted; unsaturated, partially saturated, or saturated; monocyclic, bicyclic, tricyclic, or fused; 4 to 14 membered carbocyclic or heterocyclic ring system wherein;

20

1) when the ring system contains a 4 membered heterocyclic ring, the heterocyclic ring contains 1 heteroatom;

- 2) when the ring system contains a 5, or more, membered heterocyclic ring or a polycyclic heterocyclic ring, the heterocyclic or polycyclic heterocyclic ring contains from 1 to 4 heteroatoms;
 - 3) each heteroatom is independently selected from N, O, and S;
 - 5 4) the number of substituents is from 0 to 5 and each substituent is independently selected from X;
 - b) the total number of non-hydrogen atoms in each compound is 50 or less; and
 - c) the total number of heteroatoms in $-(L)_n-Z$ is from 0 to 4; and
 - d) either;
 - 10 i) R^1 or R^3 contains at least one group G; or
 - ii) at least one L group is an E group; or
 - iii) at least one of R^1 , R^2 , R^3 , and R^4 contains one to four non-hydrogen atoms and at least one of R^1 , R^2 , R^3 , and R^4 contains more than four non-hydrogen atoms; and its enantiomers, stereoisomers, salts, and
 - 15 mixtures thereof;
- or a composition thereof.
3. The method of claim 2, wherein the ethylene response is one or more of ripening or senescence of flowers, fruits, and vegetables; abscission of foliage, flowers, and fruit; the
 - 20 shortening of life of ornamental plants, cut flowers, shrubbery, seeds, or dormant seedlings; inhibition of growth; stimulation of growth; auxin activity; inhibition of terminal growth; control of apical dominance; increase in branching; increase in tillering; changing the morphology of plants, modifying the susceptibility to plant pathogens such as fungi, changing bio-chemical compositions; abortion or inhibition of flowering or seed
 - 25 development; lodging effects; stimulation of seed germination; breaking of dormancy; hormone effects; and epinasty effects.
 4. The method of claim 2, wherein R^2 , R^3 , and R^4 are hydrogen or R^1 , R^2 , and R^3 are hydrogen.
 5. The method of claim 2, wherein n is from 1 to 7.
 - 30 6. The method of claim 2, wherein m is from 0 to 2.
 7. The method of claim 2, wherein:
 - a) each D1 is $-CXY-$, $-CO-$, or $-CS-$;
 - b) each D2 is $-NX-$ or $-O-$;

- c) each E is -S-, -SiXY-, or -SO₂-;
 - d) each X and Y is independently H, halo, OH, SH, -C(O)(C₁-C₄)alkyl, -C(O)O(C₁-C₄)alkyl, -O-(C₁-C₄)alkyl, -S-(C₁-C₄)alkyl, or substituted or unsubstituted (C₁-C₄)alkyl; and
 - 5 e) each Z is independently H, halo, or G.
- 8. The method of claim 2, wherein each G is independently a substituted or unsubstituted; five, six, or seven membered; aryl, heteroaryl, heterocyclyl, or cycloalkyl ring.
 - 9. The method of claim 8, wherein each G is independently a substituted or unsubstituted phenyl, pyridyl, cyclohexyl, cyclopentyl, pyrrolyl, furyl, thiophenyl, triazolyl, pyrazolyl,
 - 10 1,3-dioxolanyl, or morpholinyl.
 - 10. The method of claim 8, wherein the substituents, when present, are independently selected from 1 to 3 of methyl, methoxy, and halo.